

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
29 September 2005 (29.09.2005)

PCT

(10) International Publication Number  
**WO 2005/090358 A2**

(51) International Patent Classification<sup>7</sup>: **C07D 491/14**

(21) International Application Number:  
PCT/EP2005/051211

(22) International Filing Date: 16 March 2005 (16.03.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
04101092.7 17 March 2004 (17.03.2004) EP  
04106577.2 14 December 2004 (14.12.2004) EP

GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(71) Applicant (for all designated States except US): **ALTANA PHARMA AG** [DE/DE]; Byk-Gulden-Str. 2, 78467 Konstanz (DE).

(72) Inventors (for all designated States except CA, PH, US): **CHIESA, M. Vittoria**; Alpenstr. 5, 78464 Konstanz (DE). **ZIMMERMANN, Peter Jan**; Zum Lerchental 43/1, 78315 Radolfzell (DE). **BREHM, Christof**; Richentalstr. 8, 78462 Konstanz (DE). **SIMON, Wolfgang-Alexander**; Schubertstrasse 17, 78464 Konstanz (DE). **KROMER, Wolfgang**; Hinterhauserstr. 5, 78464 Konstanz (DE). **POSTIUS, Stefan**; Austrasse 4b, 78467 Konstanz (DE).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **PALMER, Andreas** [DE/DE]; Pirminweg 1a, 78467 Konstanz (DE). **BUHR, Wilh** [DE/DE]; Zum Kirchenwald 7, 78465 Konstanz (DE).

(74) Agents: **WOLF, Ulrich** et al.; Altana Pharma AG, Byk-Gulden-Str. 2, 78467 Konstanz (DE).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,

#### Declarations under Rule 4.17:

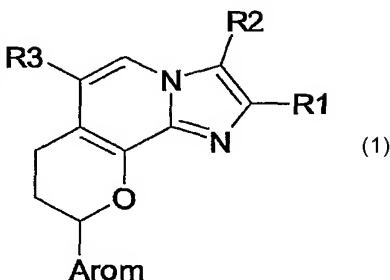
- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)
- of inventorship (Rule 4.17(iv)) for US only

#### Published:

- without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: TRICYCLIC IMIDAZOPYRIDINES



(57) Abstract: The invention provides compounds of the formula (1), in which the substituents and symbols are as defined in the description. The compounds inhibit the secretion of gastric acid.

WO 2005/090358 A2